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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,520	04/09/2004	An Duc Nguyen	11336/713 (P03034USU1)	9853
53724 7590 02/06/2008 PAULEY PETERSEN & ERICKSON 2800 W. HIGGINS ROAD SUITE 365 HOFFMAN ESTATES, IL 60195			EXAMINER NI, SUHAN	
			ART UNIT 2614	PAPER NUMBER
			MAIL DATE 02/06/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/821,520	NGUYEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Suhan Ni	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-12 and 17-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6-12 and 17-32 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. In response to the telephonic interview made 01/11/2008, applicant's argument to the rejection is persuasive and, therefore, the finality of the rejection is withdrawn.
2. This communication is responsive to the communication dated 10/11/2007.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 3-12 and 17-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-68 of U.S. Patent Application No. 10/821,521. Although the conflicting claims are not identical, they are not

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patentably distinct from each other because claims 1-68 of U.S. Patent Application No. 10/821,521 are similar in scope to claim 1, 3-12 and 17-32 of the U.S. Patent Application 10/821,520 with obvious wording variations.

Claims 1, 3-12 and 17-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-40 of U.S. Patent Application No. 10/821,673. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-40 of U.S. Patent Application No. 10/821,673 are similar in scope to claim 1, 3-12 and 17-32 of the U.S. Patent Application 10/821,520 with obvious wording variations.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 6-12, 17-20 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Larson (U. S. Pat. - 4,536,623).

Regarding claims 1 and 17, Larson discloses an acoustic transducer comprising: a frame (16), a magnet (14) stationarily mounted on the frame (Fig. 1) for forming a magnetic gap (Fig. 2), a sheet of diaphragm material folded into portions comprising: a substantially planar portion (219), and at least a fin portion (P, 214); and a voice coil (36-41, 215-218) mounted on the fin portion as claimed inherently.

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Regarding claims 6-7 and 9-12, Larson further discloses the acoustic transducer, where the sheet of diaphragm material is a sheet of electrically non-conductive material (col. 6, line 67 to col. 7, line29).

Regarding claims 8, Larson further discloses the acoustic transducer, where the sheet of diaphragm material comprises a sheet of electrically conductive material (215-218).

Regarding claim 18, Larson further discloses the low-profile transducer, where the connection is a pliable surround (18).

Regarding claim 19, Larson further discloses the low-profile transducer, where the voice coil is mounted on the fin (Fig. 1).

Regarding claim 20, Larson further discloses the low-profile transducer, where the fin extends in a direction substantially perpendicular to a projection surface of the planar surface portion (Fig. 1).

Regarding claim 28, Larson further discloses the low-profile transducer, where a projection surface of the diaphragm is in the shape of a rectangle (Fig. 3).

Regarding claims 29-30, Larson further discloses the low-profile transducer, further comprising a filler material (29) attached to the projection surface, and a second sheet (30) of material attached to the filler material, where the filler material and the second sheet provide additional rigidity to the projection surface.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 21-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson (U. S. Pat. - 4,536,623) in view of Carne et al (U.S. Pat. - 6,285,773).

Regarding claims 21-23, Larson may not clearly teach a ferromagnetic frame as claimed. Carne et al. disclose a similar structured transducer, comprising a ferromagnetic frame (2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide said ferromagnetic frame taught by Carne et al. for the transducer as an alternate choice, in order to efficiently and effectively manufacturing the transducer and make the transducer more integrated.

Regarding claim 26, Larson may not clearly teach that the frame has a substantially crenellated shape as claimed. Carne et al. disclose a similar structured transducer, comprising a frame having a substantially crenellated shape (2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide said frame taught by Carne et al. for the transducer as an alternate choice, in order to efficiently and effectively manufacturing the transducer and make the transducer more integrated.

6. Claims 24-25, 27 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson (U. S. Pat. - 4,536,623).

Regarding claims 24-25, Larson may not clearly teach a non-ferromagnetic frame as claimed. Since providing suitable non-ferromagnetic material for making a frame of a transducer is very well known in the art, it therefore would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide suitable non-

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ferromagnetic material, such as plastic, for the frame of the transducer as an alternate choice, in order to efficiently and effectively manufacturing the transducer.

Regarding claims 27 and 31, Larson may not clearly teach that the frame includes a groove as claimed. Since providing suitable groove on the frame of the transducer for mounting a diaphragm is very well known in the art, it therefore would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide suitable groove on the frame of the transducer for mounting a diaphragm as an alternate choice, in order to efficiently and effectively manufacturing the transducer.

Regarding claim 32, Larson may not clearly teach an insulated metal wire as claimed. Since providing suitable insulated metal wire for making a voice coil of a transducer is very well known in the art, it therefore would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide suitable insulated metal wire for making a voice coil of a transducer, in order to efficiently and effectively manufacturing the transducer.

***Allowable Subject Matter***

7. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Amendment***

8. Applicant's arguments dated 10/11/2007 have been fully considered, but they are not deemed to be persuasive.

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The newly added limitations, such as a magnet and a gap, fail to overcome latest rejection, since the cited reference (U.S. Pat. - 4,536,623) does clearly show an acoustic transducer comprising: a frame (16), a magnet (14) stationarily mounted on the frame (Fig. 1) for forming a magnetic gap (Fig. 2), a sheet of diaphragm material folded into portions comprising: a substantially planar portion (219), and at least a fin portion (P, 214); and a voice coil (36-41, 215-218) mounted on the fin portion as claimed inherently.

### *Conclusion*

9. **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

10. Any response to this final action should be mailed to:

**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(571)-272-7505**, and the number for fax machine is **(703)-872-9306**. The examiner can normally be reached on Monday



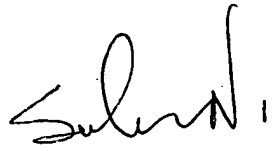
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through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(571)-272-7499**.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(571)-272-2600**, or please see <http://www.uspto.gov/web/info/2600>.

01/11/2008

  
**SUHAN NI**  
**PRIMARY EXAMINER**